AMENDMENT TO THE CLAIMS

Please amend the claims as follows:

1. cancelled

2. (currently amended) The method of claim 11 ~~1~~, wherein the electromagnetic radiation fluorescently emitted by the compound is in the ultraviolet-visible wavelength ranges.

3. cancelled

4. cancelled

5. (currently amended) The method of claim 11 ~~1~~, wherein the step of detecting comprises quantifying the electromagnetic radiation fluorescently emitted by the compound.

6. cancelled

7. cancelled

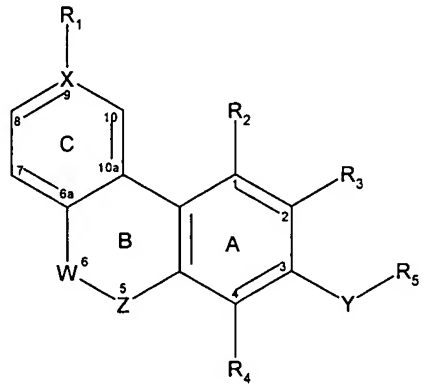
8. cancelled

9. cancelled

10. cancelled

11. (currently amended) A method of using a fluorescent cannabinoid compound comprising:

providing a cannabinoid compound having structural formula II below or a physiologically acceptable salt thereof, wherein the compound has an endogenous fluorescent property; ~~The method of claim 6 wherein the compound comprises compound formula II, and physiologically acceptable salts thereof,~~



II

wherein:

W is C=O; Z is O; X is selected from C and CH; Y is selected from NH, N-alkyl, and N=N;

R_1 is any possible member selected from ~~H,~~ halogen, N_3, NCS, CN, NO_2, NQ_1Q_2, OQ_3, OAc, O-acyl, O-aroyl, NH-acyl, NH-aroyl, CHO, C(halogen)$_3$, $COOQ_3$, PO_3H_2, SO_3H, SO_3alkyl, $SO_2NQ_1Q_2$, $CONQ_1Q_2$, alkyl and alkyl substituted in any possible position with at least one substituent group,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, ~~PO_3H_2, SO_3H, halogen, NQ_1Q_2, $COOQ_3$,~~ OQ_3, ~~alcohol, NH-COalkyl, NH-COaryl,~~ O-COalkyl, O-COalkyl-T_1, O-CO-T_1, ~~$CONQ_1Q_2$, NH-COalkyl-T_1, NH-CO-T_1,~~ O-alkyl-T_1[[,]] and O-T_1, ~~NH-alkyl-T_1, NH-T_1, SO_3alkyl and $SO_2NQ_1Q_2$,~~

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally ~~may be~~ substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

~~Q_1 and Q_2 are each independently selected from H and alkyl, or~~

~~Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or~~

~~Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,~~

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl;

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, a heterocyclic ring, an aromatic ring, a heteroaromatic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, a heterocyclic ring and a heteroaromatic ring

exciting the cannabinoid compound with electromagnetic radiation; and

detecting the electromagnetic radiation fluorescently emitted by the cannabinoid compound.

12. cancelled

13. (currently amended) The method of claim 11 wherein R_1 is any possible member selected from ~~H,~~ halogen, OH, an alkyl group having 1 to about 5 carbon atoms and an

alkyl group having 1 to about 5 carbon atoms and substituted in any possible position with at least one member selected from OH, CHO, COOH, C(halogen)$_3$, N_3, NCS, CN, PO_3H_2, SO_3H and SO_3alkyl.

14. (previously presented) The method of claim 11 wherein R_5 is selected from -D_1-D_2-T_2 and -D_2-T_2,

D_1, if present, is selected from alkyl, a carbocyclic ring having 4 to 6 ring members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

T_4 is selected from alkyl, a heterocyclic ring and a heteroaromatic ring.

15. (currently amended) The method of claim 11 wherein:

~~W is C=O;~~

X is C;

~~Y is selected from O, S, NH, N-alkyl, N=N, C=C and C≡C;~~

R_1 is selected from methyl, OH , CH_2OH, halogen and C(halogen)$_3$;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, ~~PO_3H_2, SO_3H, halogen, C(halogen)$_3$, NQ_1Q_2, $COOQ_3$,~~ OQ_3, ~~NH-COalkyl, NH-CO-aryl,~~ O-COalkyl, O-COalkyl-T_1, O-CO-T_1, ~~NH-COalkyl-T_4, NH-CO-T_4,~~ O-alkyl-T_1[[,]] and O-T_1, ~~NH-alkyl-T_4, NH-T_4, SO_3alkyl, $SO_2NQ_1Q_2$ and $CONQ_1Q_2$,~~

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally ~~may be~~ substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

~~Q_1 and Q_2 are each independently selected from H and alkyl, or~~

~~Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or~~

~~Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,~~

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, alkylamino, di-alkylamino, a heterocyclic ring and a heteroaromatic ring.

16. (currently amended) The method of claim 11 wherein:

~~W is C=O;~~

X is C;

~~Y is selected from O, S, NH, N-alkyl, N=N, C=C and C≡C;~~

R_1 is selected from methyl, OH and CH_2OH;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, ~~PO_3H_2, SO_3H, halogen, C(halogen)$_3$, alcohol, NQ_1Q_2, $COOQ_3$,~~ OQ_3, ~~NH-COalkyl, NH-CO-aryl,~~ O-COalkyl, O-COalkyl-T_1, O-CO-T_1, ~~NH-COalkyl-T_1, NH-CO-T_1,~~ O-alkyl-T_1[[,]] and O-T_1, ~~NH-alkyl-T_1, NH-T_1, SO_3alkyl, $SO_2NQ_1Q_2$ and $CONQ_1Q_2$,~~

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally ~~may be~~ substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

~~Q_1 and Q_2 are each independently selected from H and alkyl, or~~

~~Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or~~

~~Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,~~

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from an alkyl, a carbocyclic ring having 4 to 6 ring members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, alkylamino, d-alkylamino, NH, a bicyclic ring, a tricyclic terpine, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3 and adamantan-2-ylidenemethyl-T_3,

T_2 is selected from, in any possible position, a substituent group and $-CO-T_4$,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

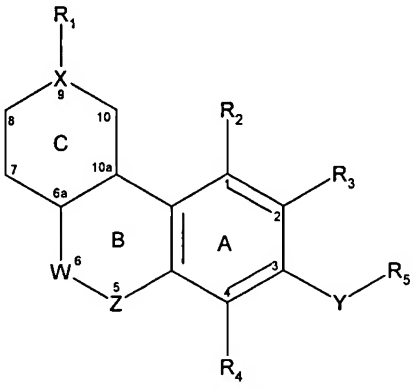
T_4 is selected from alkyl, $C(halogen)_3$ aminoalkyl, di-aminoalkyl, NH2, a heterocyclic ring and a heteroaromatic ring.

17. (currently amended) The method of claim 11 ~~1~~ comprising the step of combining the compound with a test sample.

18. (currently amended) The method of claim 11 ~~1~~ comprising the step of interacting the compound with a cannabinoid receptor.

19. (currently amended) The method of claim 11 ~~1~~ comprising the step of selectively interacting the compound with predominately one type of cannabinoid receptor.

20. (currently amended) A test kit ~~for detecting a fluorescent property~~ comprising a cannabimimetic compound having an endogenous fluorescent property and the structural formula



wherein:

Y is selected from ~~O, S,~~ NH, N-alkyl, [[N-substituted alkyl,]] and N=N[[,]] ~~C=C and C≡C~~;

Z is O; X is selected from C and CH; and

~~W is C=O and the C ring has a double bond in the 6a-10 position; or~~

~~R1 is =O and the C ring has a double bond in the 10-10a position; or~~

W is C=O and the C ring is aromatic[[.]];

R_1 is any possible member selected from halogen, N_3, NCS, CN, NO_2, NQ_1Q_2, OQ_3, OAc, O-acyl, O-aroyl, NH-acyl, NH-aroyl, CHO, $C(halogen)_3$, $COOQ_3$, PO_3H_2, SO_3H, SO_3alkyl, $SO_2NQ_1Q_2$, $CONQ_1Q_2$, alkyl and alkyl substituted in any possible position with at least one substituent group,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl;

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from -D_1-D_2-T_2 and -D_2-T_2,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, a heterocyclic ring, an aromatic ring, a heteroaromatic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, ~~or~~ adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, a heterocyclic ring and a heteroaromatic ring.

21. cancelled

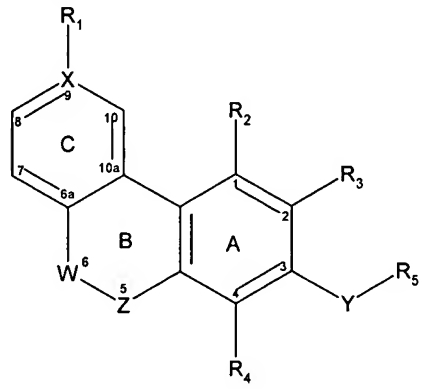
22. cancelled

23. cancelled

24. cancelled

25. cancelled

26. (currently amended) A ~~The~~ compound of formula II, and physiologically acceptable salts thereof,



II

wherein:

W is ~~selected from~~ C=O ~~and C=S~~;

X is selected from C and CH;

Y is selected from ~~O, S,~~ NH, N-alkyl[[,]] and N=N[[,]] ~~C=C and C≡C~~;

Z is O;

R_1 is any possible member selected from ~~H,~~ halogen, N_3, NCS, CN, NO_2, NQ_1Q_2, OQ_3, OAc, O-acyl, O-aroyl, NH-acyl, NH-aroyl, CHO, $C(halogen)_3$, $COOQ_3$, PO_3H_2, SO_3H, SO_3alkyl, $SO_2NQ_1Q_2$, $CONQ_1Q_2$, alkyl and alkyl substituted in any possible position with at least one substituent group,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, ~~PO_3H_2, SO_3H, halogen, $C(halogen)_3$, alcohol, NQ_1Q_2, $COOQ_3$,~~ OQ_3, ~~alkyl-hydroxyl, NH-COalkyl, NH-COaryl,~~ O-COalkyl, O-COalkyl-T_1, O-CO-T_1, ~~$SO_2NQ_1Q_2$, $CONQ_1Q_2$, NH-COalkyl-T_1, NH-CO-T_1,~~ O-alkyl-T_1[[,]] and O-T1, ~~NH-alkyl-T_1, NH-T_1, SO_3alkyl and $SO_2NQ_1Q_2$,~~

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally ~~may be~~ substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

~~Q_1 and Q_2 are each independently selected from H and alkyl, or~~

~~Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or~~

~~Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,~~

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, $C(halogen)_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl;

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, a heterocyclic ring, an aromatic ring, a heteroaromatic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, a heterocyclic ring and a heteroaromatic ring

but if W is C=O and Y is O then R_5 is not CH2COOH or CH2COOEt.

27. cancelled

28. (currently amended) The compound of claim 26 wherein R_1 is any possible member selected from ~~H,~~ halogen, C(halogen)$_3$, alkyl amino, di-alkylamino, NH_2, OH, an alkyl group having 1 to about 5 carbon atoms and an alkyl group having 1 to about 5 carbon atoms and substituted in any possible position with at least one member

selected from OH, CHO, COOH, C(halogen)$_3$, N_3, NCS, CN, PO_3H_2, SO_3H and SO_3alkyl.

29. (previously presented) The compound of claim 26 wherein R_5 is selected from -D_1-D_2-T_2 and -D_2-T_2,

D_1, if present, is selected from alkyl, a carbocyclic ring having 4 to 6 ring members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic terpine, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

T_4 is selected from alkyl, a heterocyclic ring and a heteroaromatic ring.

30. (currently amended) The compound of claim 26 wherein:

~~W is C=O;~~

X is C;

R_1 is selected from methyl, OH, CH_2OH, halogen and C(halogen)$_3$;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, ~~PO_3H_2, SO_3H, halogen, C(halogen)$_3$, alcohol, NQ_1Q_2, $COOQ_3$,~~ OQ_3, ~~NH-COalkyl, NH-CO-aryl,~~ O-COalkyl, O-COalkyl-T_1, O-CO-T_1, ~~NH-COalkyl-T_1, NH-CO-T_1,~~ O-alkyl-T_1[[,]] and O-T_1, ~~NH-alkyl-T_1, NH-T_1, SO_3alkyl, $SO_2NQ_1Q_2$ and $CONQ_1Q_2$,~~

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally ~~may be~~ substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

~~Q_1 and Q_2 are each independently selected from H and alkyl, or~~

~~Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or~~

~~Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,~~

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, alkylamino, di-alkylamino, a heterocyclic ring and a heteroaromatic ring.

31. (currently amended) The compound of claim 26 wherein:

~~W is C=O;~~

X is C;

R_1 is selected from methyl, OH and CH_2OH;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, ~~PO_3H_2, SO_3H, halogen, C(halogen)$_3$, alcohol, NQ_1Q_2, $COOQ_3$,~~ OQ_3, ~~NH-COalkyl, NH-CO-aryl,~~ O-COalkyl, O-COalkyl-T_1, O-CO-T_1, ~~NH-COalkyl-T_1, NH-CO-T_1,~~ O-alkyl-T_1[[,]] and O-T_1, ~~NH-alkyl-T_1, NH-T_1, SO_3alkyl, $SO_2NQ_1Q_2$ and $CONQ_1Q_2$,~~

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally ~~may be~~ substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a

heterocyclic ring and a heteroaromatic ring,

~~Q_1 and Q_2 are each independently selected from H and alkyl, or~~

~~Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or~~

~~Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,~~

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from -D_1-D_2-T_2 and -D_2-T_2,

D_1, if present, is selected from alkyl, a carbocyclic ring having 4 to 6 ring

members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, alkylamino, di-alkylamino, NH, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3 and adamantan-2-ylidenemethyl-T_3,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

T_4 is selected from alkyl, C(halogen)$_3$ aminoalkyl, di-aminoalkyl, NH2, a heterocyclic ring and a heteroaromatic ring.

Claims 32-40. cancelled

41. cancelled

42. (previously presented) A pharmaceutical composition comprising a therapeutically effective amount of at least one compound from claim 26 or a physiologically acceptable salt thereof.

43. cancelled

44. (currently amended) A method of stimulating ~~a~~ at least one of the CB1 and CB2 cannabinoid receptors ~~receptor~~ in an individual or animal comprising administering to the individual or animal a therapeutically effective amount of at least one compound from claim 26 or a physiologically acceptable salt thereof.